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Progress towards ultracold gases in arbitrary 2D potentials[1]
THEODORE CORCOVILOS, Duquesne Univ — We describe our progress in building an apparatus for investigating degenerate quantum gases of potassium in arbitrary two-dimensional optical potentials. The optical potentials are created by holographic projection of an image created using a MEMS mirror array. Systems we would like to study with this experiment are quantum simulations of bosons and fermions at crystal heterojunctions and systems with well defined boundaries, including topological edge states.

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